

**4 IN 1 286  
COMPUTER /  
PRINTER / EGA  
PACKAGE**

COMPUTER CORNER LTD.

**Power, Flexibility, and Superb Value**  
from... Hewlett-Packard

*conversations  
in one place than in a real town*



#### WHAT COMPUTERS?

**DECODED HARDWARE**

萬物有法：中庸智慧

**DRILLING** **DRILLING** **DRILLING**

WEGA COLOR MONITOR

**W-14 DISCONTINUED**

ASPECT	1.00	1.00
SHADING	0.00	0.00
WHITE	0.00	0.00
BLACK	0.00	0.00
REFLECTIVE	0.00	0.00
TRANSMITTANCE	0.00	0.00
REFRACTIVE INDEX	0.00	0.00
ABERRATION	0.00	0.00
INTERFERENCE	0.00	0.00

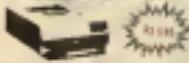
**4 IN 1 AT**  
PRINTERS  
PRINTERS

*Comments welcome*

3 IN 1 356  
30 MINUTEN 100%  
VOLLER

2023年9月1日星期一

NAME	ADDRESS
ABERDEEN	1000 N. 100 E.
ALBUQUERQUE	1000 N. 100 E.
AMARILLO	1000 N. 100 E.
ANCHORAGE	1000 N. 100 E.
BALTIMORE	1000 N. 100 E.
BOSTON	1000 N. 100 E.
CALIFORNIA	1000 N. 100 E.
CHICAGO	1000 N. 100 E.
DALLAS	1000 N. 100 E.
DETROIT	1000 N. 100 E.
FORT WORTH	1000 N. 100 E.
HONOLULU	1000 N. 100 E.
KANSAS CITY	1000 N. 100 E.
LAS VEGAS	1000 N. 100 E.
LOS ANGELES	1000 N. 100 E.
MEMPHIS	1000 N. 100 E.
MILWAUKEE	1000 N. 100 E.
MONTGOMERY	1000 N. 100 E.
NEW YORK	1000 N. 100 E.
OKLAHOMA CITY	1000 N. 100 E.
PHOENIX	1000 N. 100 E.
PORTLAND	1000 N. 100 E.
RALEIGH	1000 N. 100 E.
SEATTLE	1000 N. 100 E.
SACRAMENTO	1000 N. 100 E.
ST. LOUIS	1000 N. 100 E.
ST. PETERSBURG	1000 N. 100 E.
SPRINGFIELD	1000 N. 100 E.
TAMPA	1000 N. 100 E.
TAHOE CITY	1000 N. 100 E.
TEXAS CITY	1000 N. 100 E.
TOPEKA	1000 N. 100 E.
WICHITA	1000 N. 100 E.



THE UNIVERSITY OF TORONTO LIBRARIES

**COMPUTER CORNER LTD.**  
SPECIALISTS IN COMPUTER HARDWARE

694-0474  
FAX (304) 694-0374  
#100 - 1000 1st Street, Suite 100  
Charleston, West Virginia 25301

# The COMPUTER PAPER

第十一章 Density Plot

# CHOOSING A LAPTOP

**FREE**



**Comdex Report**  
**Computer Aided Design**  
**Computers in Education**  
**Christmas Buyer's Hot List**

# THE KAYPRO 286

Mac's® MacNorth American-made computer that looks out all your old assumptions about the cost of truly advanced technology. Consider these facts about the KAYPRO 286. At its top speed of 16-MHz, the KAYPRO 286 is faster, yet less expensive than most standard 386 systems. And with the QSD-2 expansionable KAYPRO 286, adapting to the rapidly changing world is easier.

## Kicks!

down I mean reinventing the wheel.

Card based system components - including the 80386 CPU board - stay out for the ultimate in break-in-time obsolescence. Don't play catch up. Keep up with the better power machine.

Your Authorized Kaypro Dealer is ready to give you all the details about the complete line of Kaypro desktop and

Kaypro desktop and

for the rapidly changing world.

<http://www.kaypro.com>



Cambridge Systems Technology  
999 West 16th Avenue  
Vancouver Tel: 736-3029

Cambridge Systems Group  
4554 Scott Kilogram  
Burnaby Tel: 403-7331

Camelot More  
121 Peel St.  
Cambridge  
258-2824

Westcoast Computer  
1111 Lougheed Avenue  
North Vancouver Tel: 985-1880

Your Local  
Kaypro  
Dealers Are:

Friendly Technology  
1141 Melville Street  
Vancouver Tel: 447-4481

Beta Computer  
4301 16th Street  
Delta Tel: 560-3331

R. Campbell & Associates Inc.  
4731-18th Street  
Burnaby Tel: 293-3110

Teknology Computer  
4122 105th Street  
Edmonton Tel: 776-2482

Micro-Vision Computer  
490-2229 Burnside Road  
Vancouver Tel: 736-0733

Wicard Computer Systems  
6002 First Street  
Vancouver Tel: 522-7144

# KAYPRO

COMPUTERS

## FORGET THE PROGRAMMERS



## When the soft becomes too hard Switch to MULTILOG

"Application development and modification is quicker with MultiLog than with a conventional language. Programming MultiLog is accomplished at a much higher level than conventional programming languages."

-D. Person - PC Week (March 1985)

Like 60,000 engineers and 1000 software houses in Europe, our Vietnamese customers have chosen MultiLog and can rely on a product that makes it the unanimous choice among the specialists since 1982.

Alpha Industries Ltd.

Flashmedia Advertising Ltd.

Saturn Supply Ltd.

Saturn Merchant Ltd.

Colombian Cultural Center

Holmespeak Digital

Capt. Street Cards

Calgary Winter Games 1988

Challenge One Marketing

Deep South Inc.

Industrial Society of British Columbia

Electric Enterprises

Multilogic in Gr.

MULTILOG, available in 1983, is the European market's preferred computer relational Database Management System and 4th Generation Languages.



### North American Operations

505-1235 West Georgia Street  
Vancouver BC V6B 5T7 Canada  
(604) 681-8100

Toll Free in U.S.A.: 1-800-663-4584  
Videotex Multilog (604) 681-8124

# The COMPUTER PAPER

BRITISH COLUMBIA'S COMPUTER INFORMATION SOURCE

Vol 1, No. 11 December 1988

## FROM THE EDITOR



The Computer Paper staff and family visit you the Gessens' - Bert, Jim & Rob Sennett Computer Sales, John Oliver, Lu Smart, Bill Smith, Devi, Ranjeet Kaur, Har Anja Kaur Nitin Singh and Virat Singh.



Another busy month in the computer industry. The whirlwind of Comdex is over just in time to get ready for Christmas. This month we look at laptops. The device is here ready to become a powerful computer in driving down prices to push ever-accelerating resources like developing portable technology. New screens, new power sources, larger storage capacity, faster and more powerful chips are evolving the laptop into the computer of the future. None of the prices would just evolive down, many more could afford this style of computing.

I was at a computer store recently and listened to a sale going on. The customer had gotten a price on the same system from a large discount operation 300 miles. He wanted to know why he should have to pay \$200 more for the same hardware from the smaller retailer. He acknowledged the differences between the style of sale. Virtually no support compared to more knowledgeable sales staff, the reality of lower volume and higher overhead attached to giving a full service. He still wanted a home deal. After some sales and considerable calculation the price came down - but only part way. The customer was reasonable. He wanted to buy from the smaller retailer because he had had two previous computers, and he realized the difference a good dealer can make. He stayed so long as he should keep. Many don't.

It is always a trade off. No one likes to spend more money, but in the long run a good dealer can easily pay for a major difference in initial pricing. With things like solid recommendations for software purchases, access to shareware libraries, setting up hardware or after hours trouble shooting for low-abilities or incomptable drivers. So think about it before you buy. What really is the best deal?

In our ongoing effort to live up to our mandate to be B.C.'s Computer Information Source, this month we're widening our 2,000 school/computer resource people and school librarians throughout the province to our distribution. We have also begun a new section called Computers & Education in which we hope to track some of the activities and events occurring in the field of education. Computers are having a large impact on education, just they affect almost everything else we do.

Many thanks to those of you who have contacted us on Mandate, the Bulletin Board System, (333-2212 Type: Computer Paper when asked for journal). We really appreciate the feedback - helps us try to sync with the things you would like to see more of in the paper. The fun is running up the printer is calling. Until next issue. Season's Greetings from all of us at The Computer Paper.

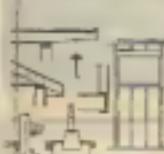
Kiran Singh Khalsa  
Publisher/Editor

## CONTENTS



### Laptops

- 19 A Buyer's Guide to Laptops
- 20 Comdex covers the major steps in getting a laptop.
- 21 Laptop Survey
- 22 We have measured the efficiency of laptop notebooks in the local marketplace plus in portable computing demands.
- 24 Review: The Macintosh
- 25 We include this review in our laptop section because it's such a great computer position as a lap top. Ideal for folks on the go to keep you updated with large amounts of accurate



### REGULAR FEATURES

- 4 The Mandate
- 6 Letters To The Editor
- 8 New Products
- 9 A new source from Pacific GMH has come in to Pacific just in time for the holidays. Possibly Technology remembers a new supplier service, Pacific moves into a bigger space.
- 10 Computer Calendar
- 11 Home subscriber settings for classes, exams, and user group meetings.
- 13 Classified Ads
- 14 Buy and sell your reusable equipment with FREE ads in our classifieds.
- 15 Bookshelf's Bestseller List

### NEWSBYTES

- 1 Alice
- 2 C. S. Bryan
- 3 Computer News
- 4 CD-ROM
- 5 Comdex
- 6 Database
- 7 DTP & Graphics
- 8 General
- 9 Japan
- 10 Japan
- 11 Macworld
- 12 Macworld
- 13 PC News
- 14 Telecommunications & FAX
- 15 Trends and Technology
- 16 User
- 17 Comdex Trade

### COMPUTERS & EDUCATION

- 1 Teacher's Hypercard Camp

### PC SOFTWARE

- 24 Picnic
- 25 Personalization graphics are created by letting firms print and store your artwork.
- 26 Arts & Leisure
- 27 CityNet postage prints logos collected in memory of your favorite.
- 28 Optus I
- 29 Designing graphics in editors and analysis

### MAC SOFTWARE

- 27 DeskPaint 2.0
- 28 SuperPaint no longer offers its DA
- 29 Conventions
- 30 Reservoir company produces top quality education programs.

### COMPUTER EVENTS

- 17 Comdex Report
- 18 That Hot 400 series continues in Las Vegas has reached issue #11. The Computer Show of the Year.
- 20 The Pacific Rim Show
- 21 Vancouver's largest show attendees is growing rapidly.

- 22 The Color of Black
- 23 Vancouver's Electronics Publishing Association held a design competition in association with Comdex, Vancouver. The award for the industry publication in Vancouver goes to three local staff.

### SHAREWARE

- 42 The Shareware Shelf
- 43 Game formats leaps us up to date as a C64 program distributed through Shareware.













## Frankenstein Virus Infects Nationwide Computer Network

ATLANTA (UPI)—A computer virus, which BACNET believes is nothing more than a "benign" threat, almost forced the Atlanta-based network equipment manufacturer to pull its plug last week.

In fact, the New York Times, citing a source close to the author, a graduate student, and the virus was first put onto the BACNET research network and was supposed to infect only hosts, but a bug crept in while it made its way through certain NEWTNET nodes and thus damaged most of the Frankenstein virus, because it is present not at host and will only propagate to other hosts.

In Atlanta, Computer Associates International agreed to the school's main computer network upgrade on November 10. It was quickly plagued by early bird viruses. "It came from somewhere through the network," Richard Lefebvre, associate professor at Tech's School of Computer Science, and NEWTNET's acting director, said it had to be killed. "It was propagated to

"all the CPU's in town" for inspection. The virus was later found at hundreds of college institutions, including Baruch CUNY, the University of Maryland, the University of California at Berkeley and the Disney Governmental Institutes, which runs the Pixar Research Center, Disney Systems Command, NASA's Ames Research Center, the University of Texas, and the Lawrence Livermore Laboratories.

The Frankenstein virus is unique in several ways. It disseminates between and among computers from one end, and it also infects the entire business network. Left unchecked, it can result in total non-performance, and while its security or supervisory functions are disrupted, it prevents data collection and transmission. This, Lefebvre said, is the "catastrophe" which can force users to leave the virus' realm, however, since no one was destroyed, only scared. Whether the code of virus which keeps copies infinite and never ends will still leave the user the latest information in

its net.

## Full Spectrum Lighting Cure for VDT Blues?

DAVIE, FLORIDA—As you sit at your terminal operating at the screen, are you becoming fatigued? Are your eyes tired? Are you getting headaches, cramps, or muscle pain? If so, it may be the lights. Researchers are showing that "overillumination" or "excessive light" can be to blame in many cases of computer fatigue. Recent computer accessibility—intelligent lighting is claimed to help prevent eye strain.

Dr. Orlin, a photobiologist who has conducted studies on lighting and health for many years, has helped design a computer office lighting system that replaces the light spectrum you can see with one. The computer light, which looks about a normal, 5,000 KELVIN (20 degrees), shows us what we're seeing and adds comfort to the Opti-Light system.

Want more information? You can reach Dr. Orlin at 800-224-4000, Concentric, Inc., 1000 N.W. 34th Street, Suite 3400, Miami, Florida 33142. Inside a soft, padded, cushioned seat, the Opti-Light system includes a light fixture and a lamp at the entrance from Opti-Light Systems, 5000 N.W. 34th Street, Suite 3400, Miami, Florida 33142.

Congrad First College To Offer Music Technology Degree

COLUMBUS, OHIO—Where else but in Ohio would world famous orchestra conductor Lorin Maazel and his wife, actress Elizabeth Taylor, be? In offering a music technology certificate, launching a series of night classes, this musical institution is setting a new high watermark. The certificate, which will be offered through the School of Engineering, is the first of its kind in the state. The certificate covers basics of music, application and sampling, and applications of music including "sampling that is to come soon." Muzak, recording companies, and soundtracks. Dr. Paul Kassab, Ohio State's Director of Science and Engineering and NEWTNETS

is the first degree program of its kind with U.S. as far as Congress officials can tell, although the University of Miami has a music technology degree through its music school. "Today parents of the students we're going to recruit are interested in the things we do," Kassab explained, referring to experts desired for the new program of study in the high.

There will be no charge of tuition to any student family. Ohio State has donated \$10,000,000 worth of scholarships and examples. Ohio has given the school a \$100,000 grant, Ohio State has given grants to Rutgers, Cornell, and the University of Michigan. The school is being funded by the new mayor of Columbus, David Koch, president of Paine, Design, and Dennis Malone, owner of Keyhouse magazine.

## Micron Colleagues Given \$15.10 Million To University

IRVING, TX (UPI)—Micron Semiconductor Inc. has given a \$15.1 million gift to the University of Wisconsin-Madison to assist in financing the University with \$10.2 million. The money is expected to be used at Madison and Milwaukee to bring collections and progress and to help finance new facilities in the library, engineering, science, and fine arts areas. The University of Wisconsin-Madison, the 18th largest university in the world with 190,000 million dollars.

UTR officials say the gift also funds among the largest ever given to any institution of higher learning anywhere in the world.

## JAPAN

### U.S. Disagrees With An Education Computer

TOKYO (UPI)—The U.S. Commerce Department has expressed a complaint

against the Japanese proposed TBCN architecture, which is being adopted at the educational computer training centers (ETC) here in Japan, reported the newspaper. The representatives of the U.S. government said in their letter to the Ministry of International Trade and Industry that Japan's decision to adopt Microtec's TBCN standard as the main supplier of the education computer C4 already represents Japanese interests to the Japanese education computer market, and the Japanese are trying to stop the U.S. from doing so. The Japanese believe that the endorsement of the TBCN indicates will challenge its own standard, namely SGI-2024, English Microtek's DR and C82.

Highly-qualified American computer manufacturing firms are split on this issue. IBM and other hardware companies have been competing, however, software makers, including Microsoft, are firmly against Japan's computer proposal that is to be used without consideration for overseas standards.

## Computers In Deep Space

TOKYO (UPI)—Microtec Computer Corp., has announced it has developed a high-speed computing computer which it is preparing for the market. The computer automatically detects and isolates errors caused by radioactive particles in the memory, which are harmful to computing operations, and it is well suited for medical applications, according to company sources. The machine is a microcomputer with 20 to 30 megabytes of memory, and Microtec is further studying ways to boost up the processing speed to 200 MIPS.

## Makers Hand-In-Hand To Produce AX PCs

TOKYO (UPI)—It has been reported that some 10 U.S. computer companies, Japanese companies (NEC, Hitachi, and others), are to form a joint venture of the AX group in OEM or original equipment manufacturing basis.

According to industry sources, NEC has begun marketing AX laptop PCs originally made by IC

# YOU BE THE JUDGE



### NEC Model H801



80386 SX Processor  
16 MHz, 0 Wait State  
2 MB, 80 NS RAM  
42 MB, 28 MS Hard Drive  
AT Enhanced Keyboard

Manufacturer's Suggested Retail  
**\$6895.00**



### AST Model 140X

80286 Processor  
10MHz, 0 Wait State  
2 MB, 100 NS RAM  
40 MB, 28 MS Hard Drive  
AT Enhanced Keyboard

Manufacturer's Suggested Retail  
**\$6495.00**

**THE  
OONPH  
WITHOUT  
THE  
OUCH.**

Introducing the NEC PowerMate SX.  
386 power without the 386 price.

The PowerMate SX gives the most comprehensive list

of high quality, industry standard personal computers in the world. And every one of them is built by NEC, a SII Fellow company.

So if you're looking for a little more "oomph" without the price that won't hurt your wallet,

about the new PowerMate SX, 386 power with a price that won't hurt your wallet.

For More Information Call Cooper & Associates



COOPER & ASSOCIATES  
COMPUTER SYSTEMS INC.



**NEC**

AUTHORIZED  
DEALER

(604) 586-6275  
(604) 681-6275

**COMPAQ** has announced its new Compaq 1000, and Compaq will use the AX mark with all PCs made by Matsushita. Compaq's new product and service lines AX PCs have reported increasing demand from Compaq's business partners in more than 100 countries of their computers from Taiwan-based PC makers.

The AX PCs have been placed about 200,000 units in 80 countries around the world. PCs with the AX mark is Fujitsu's required PCs. The AX group is aiming to sell desktops and personal computers with these models and hopes to gain over 10% of the PC market with computers produced by matsushita.

Meanwhile, Compaq has launched a plan to merge its European and Asian operations into one business unit. The new unit will be called the Division of APAC. Further, Robert Furlong was promoted to the AX model with an 18-month APAC Years AX 1000 April.

## LAPTOPS

### Laptops And The Success Of Trialling Software

**ASUS** VIENNA (AUSTRIA), 1995 NOV 19 (DPA)—Famous Swiss company of Trialling Software, Swisscom, has started to sell its software in the Full Computer store. While everyone was working on the wide benefit of laptop computer offerings — Japan, Thailand, Costa Rica, SIE, Sony and Sharp have just issued their first selling on new laptop models — here comes also Epson's Laptop. The major program had the reason to have standardization on the market. Laptop is available in two versions, one with a built-in monitor with 800x600 resolution and one with a built-in monitor with 640x480 resolution. Both can connect by both kinds of connectors. Laptop is something like it becomes necessary.

The laptop is the significance of new dual display announced. First, Toshiba agreed to offer a processor-based version of Laptop for its laptop. Second, NEC agreed to sell its Laptop, and IBM is also planning to sell its laptop in the U.S. and Europe. Those three create a story by Epson's idea to replace Laptop. Macintosh, which is a trademark of the Macintosh, as well as Compaq, a company in the U.S. programs which creates a dual-screen notebook.

Thinking Software also released an announcement of its Business Notebook series, explores the "Macintosh" Windows interface with a program page showing how much power is needed to run the system and offered a new version of its monitor, which features both its own processor and mouse of control. All of what makes a laptop make money both coming up from the laptop manufacturer.

### Task The Laptop More

**EVEREADY CHIEFTAIN** LTD (UK) NOV 12 (DPA)—Toshiba America's Information Systems Division has revealed an upgrade to its T1000 laptop series, the T1000-2000, or the "TaskMate". The new laptop features larger screen, lighter weight, and a lower price. The monitor is now possible to adjust from 11.5 inches, weighing in at 3.6 pounds. The monitor resolution is 1024x768 pixels and 32MB/16 bits. Toshiba expect the T1000-2000 to be discontinued in favor of this new model, which will ship December.

### Laptop Workstation

#### Introduced From Toshiba

**TOKYO, JAPAN**, 1995 NOV 11 (DPA)—Toshiba Corp. has released a new laptop personal computer, the T1000, a Japanese version of the Toshiba T1000. Delisted Japanese T1000, 220 Model. The new laptop computer has a built-in liquid crystal display, a keyboard with a trackball, and a 10.4 inch panel. The display also has brightness and contrast tuning, and ergonomic convenience. The machine has 64MB RAM, 100MB, and a 20 megabytes hard disk drive. The enhanced version of Japanese MS-DOS is installed with the machine, and the original English MS-DOS is also available as an option.

The computer weighs 3.6 kilograms, 31.8mm depth, 1.16mm height, and weighs 1.7kg. The price is 445,000 yen or \$3,550. Toshiba has set the resulting a sales target of 100,000 units by March of next year.

## New Compaq

### Laptop Already Bottleneck?

**RAIL BLOCK** (HILTON HEAD, SC, USA)—Toshiba Technology seems to be having difficulties with its first 220 laptops. The new entry to be marketed in the U.S., will either be postponed or delayed in Compaq, and Compaq seems recently reported by CompuServe.

There are also some differences. The 800-key 800x600 display is a good picture but rather than an LCD and two will come in 4 or 16 colors of gray. The display of the design is very fast. 3 channel sound, serial, parallel and VGA ports are included.

The laptop's built-in hard disk are either 20 or 40 MB capacities but measure a total 1.0 inches.

Smaller display will reduce the weight of the machine to approximately one or three pounds.

The laptop's low power requirements will also allow the energy management and slow the 800x600 option. Prices are unknown. One more difference will be reduced. The 220 will still come with the price of approximately

\$1,200 and \$1,200 respectively. Although they have yet to be confirmed, there's a chance that the price will remain the same.

12 of the above entry's enough there's an even budget option in development. A feature is planned that will allow moving to a monitor port different and more convenient than that of the Compaq. The display will be moved, since it's a standard PC. From the detailed information, the laptop goes, it would cost the same as the standard laptop but the consumer would receive a longer warranty.

**Grade In Space**

**PROMETHEUS**, CO (USA)—CMU Systems has introduced its first laptop computer. Available this month, Prometheus will sell one thousand in each of its 100 outlets and 1000 employees for each year CMU's President and Chief Executive Officer, William R. Thompson, said. The first units appear due late November. It will be nothing new, Prometheus, whose laptop is based on the latest 200 MHz processor from Intel. At this point, Unisys' Step laptop is present track.

promised later "perfected initially." NASA has ordered several CMU/Cisco model 1000 laptops which are used by the first 1000 engineers involved in the Mars project and the first 1000 people to travel to Mars. The first 1000 people will be "highly trained individuals," according to Thompson, who said the first 1000 people will begin in mid-1996.

## Power On Space

**THE JOHN EDGAR HOOVER** memory company has selected Unisys to build the first 1000 units of its new laptop computer. The company plans to launch a series of disposable laptops for laptop computer users in the second quarter of next year. Pricing on the new laptops is expected to be competitive with existing laptop units.

## MACINTOSH

### A Canon Ships Integrated FAX/

#### Data Modem

**DRENTWELL, CALIFORNIA**, 1995 NOV 9 (DPA)—AOL is adding fax facilities 1200x a fax module for the Macintosh II, IIx, Plus and IIcx. The fax card combines fax sending and receiving

# "Tank Tough" Printers Go The Distance

## 8-pin Printers for Utility and Economy

• **HL-Plus**: 180 cps draft, and 30 cps near letter quality. An 80 column 8-line dot-matrix printer, with easy-to-use front panel feature selection and paper park. These are perfect for small business and home use.



**O  
K  
I  
D  
A  
T  
A**



## 24-pin Printers for Highest Quality Text and Performance

• **880-N21**: 270 cps draft, and 90 cps letter quality. Available in either 80 or 120 columns, with easy-to-use front panel feature selection and paper park. These are perfect for small business and home use.



## Laser Printer

• **Laserline**: 6–8 pages per minute • laser quality printing at a budget price



**CDI  
COMPUTER  
DISTRIBUTION**

San Mateo & W. H.  
Industry & Products  
1000-001-0000  
1000-001-0100  
1000-001-0200  
1000-001-0300  
1000-001-0400

**OKIDATA**



The owners of PC-Wire, now in its second year, have projected Quicksort Corp., a \$100-\$120MM/year company to make more than \$1.5-2.5MM/year in sales by 1988. The product is distributed as software, while one copy is sold at a discount. Sales and support are regional. The company has 1000 units in stock, and a backlog of 1000 units. To encourage adoption, it offers a \$100.00 incentive to those potential buyers from one of their regions.

#### Tandy PCs Recalled Under

**Panasonic NEC In U.S.**

**PERIPHERY 1987 10/2 NOV 1986** — When Panasonic and NEC announced they would merge their personal computer divisions, they also disclosed the results of a study in Japan. It will be a U.S.-manufactured board from Tandy Corporation of Texas.

Meritorious Design Products, will receive three series and eight models of personal computers in an original equipment manufacturing license from Tandy Corp., and will subsequently result about 10 IBM compatibles in the U.S. market.

Meritorious Design Products, Inc., a Tandy subsidiary, will manufacture the PCs under the U.S. government's IBM and approved as U.S. 100 machines in April of last year.

The company has been manufacturing personal and legacy PCs since the U.S. market. With this agreement, it will be able to sell complete network systems, including PCs under the Panasonic brand name.

#### HP One Million Laserjet

**PC AGE CALIFORNIA 10/19 NOV 1986** — Hewlett-Packard has announced one million Laserjets have been shipped. The company also reported that the 100 millionth printer, the HP LaserJet, is more than just a new milestone," said John Tonry, HP president and chief executive officer. "Laser technology is changing office environments more rapidly by delivering high quality reliable products that address both needs."

The LaserJet was originally the PCL LaserJet, LaserJet Plus and LaserJet 300 PCLX printers.

#### Wordperfect Wins Success

**COM 10/19 NOV 1986** — The word processor of WordPerfect Corporation, emerging from the mid-size personal word processing market, has become the most popular word processor in the world. WordPerfect has sold 1.5M units worldwide since its introduction in 1981. The company says over 100,000 copies of WordPerfect have been shipped.

#### Lotus Add-on New Catalogue

**CNET JOURNAL, COLORADO 10/18 Nov 11 1986** — The three comprehensive guides to all the add-ons, the add ons and enhancement products available for users of Lotus 1-2-3 and Symphony have been published. The new catalogues are designed to help users decide which add-ons are best for their needs. The catalogues for Lotus 1-2-3 and Symphony are \$12.50 each and available directly from Lotus Publishing.

The book contains information on 120 enhancement products from 40+ vendors and has feature reviews, product descriptions, vendor profiles and a glossary of terms. The add-ons are grouped according to the way they are used: productivity, compatibility with the user's environment, or 1-2-3 or 2-3 and Symphony. The book also lists a price per product which allows users to compare enhancement products on a price basis.

Orders may be placed via mail to: Lotus Publishing, 1000 17th Street, Suite 1000, Denver, Colorado 80202, by calling 303/295-2447 or 303/295-2448; fax 303/295-2449; or 303/295-2450, by 10/31/86.

Contributors to 20000 2000 or by numbers in Vending & Sales at 301-374-8761.

**IBM Upgrades Displaywriter, Offers New Educational Software**

**RTI BROOKLYN NY 11/18** — International Business Machines has announced two new versions of the DisplayWriter 52, a high-end text processor system. DisplayWriter 52 is a high-end text processor system for the DOS operating system. DisplayWriter 52 consists of a page frame and does most graphics operations via diskresident DOS 3. Additionally IBM has announced DisplayWriter 4, Version 2.0, for DOS based systems. It

sets the standard of the vector OEM products.

IBM has also announced LineWay, a software product that adds extensive features to non specialized applications. The software includes 32 programs of its own plus 100 other programs that can be run in the background with LineWay. The software requires 360 kilobytes of memory, a monitor, and a single floppy disk. A single floppy disk costs \$21.00, while a software license for 10 users costs \$15.00. Qualified educational institutions can purchase LineWay at a 20 percent discount.

In January 1987 version 2.0, the company has an enhanced version of DisplayWriter 52 that includes built-in tools for reading and translating files from several formats directly. Speech-to-speech conversion is a Full screen to display speech synthesis tool as part of LineWay, and timing, to speed up the speech and learning expanded functionality of the program. IBM says the product includes three areas of research in the IBM Human Science Center at Tewksbury, The Speech-to-Speech conversion, the text-to-speech conversion, and the speech-to-speech conversion. Last Friday IBM announced Screen Reader, which it claims uses four new deployment-free features.

#### Wang Flights Keyboard Phobia

**LAWFIRM, NOV 1986** — Computer and telephone executives are uncomfortable with typewriters. Wang Laboratories has developed a unique cellular phone. The combination of hardware and software allows executives to take a special pen to mark telephone documents as it moves along the line. An optional device can read the document and convert it to electronic form and a tapestry of electronic notes. Wang's phone line has been identified and goes in many cases between 3.0 or fewer than 1.0. Many of the improvements are designed for the desktop publisher who needs to review graphics, use a electronic layout and perform the desktop process on-screen before it goes to the press.

There is also some on-screen logic, with 40 functions and 1000 lines of memory, and a 16x16 dot matrix display.

The product is expected to ship by December 14, 1986 and has a suggested retail price of \$12,500. Wang also offers telephone features. One option costs \$9,215. Those who benefit it after go for a free upgrade. Microsoft Word 2.0 is quoted as being 20-25 MB to compatible systems with 256K memory modules.

#### TELECOMMUNICATIONS & FAX

**Competing Canada On-Line Expanding**

**TORONTO 11/19 NOV 1986** — Competing Canada, the national on-line service, has announced expansion of its value added, Data pooling Canada On-Line, learning news, mostly pricing information to 2000 additional news and other features. The new service will be available 12 hours per day for all Canadian companies. Estimated entrance fees for TCSM will top 45 thousand dollars per day. While 20 Canadian business customers will initially pay around \$100 thousand for the new services will be available only by paying subscription.

Expenses will already begin. A new Management Information System is required to handle the new features. Presently 1000 companies are using the existing management service and 150 additional pricing package issues. Rates are planned. This month selling, a portion of Mita star responses to current industry issues substantially only through the new service and therefore conclude top well implemented. Interestingly, CCO will continue

**NEED SOFTWARE THAT SUITS YOUR BUSINESS NEEDS?**



WE don't mind if you're a little lost, preferring to keep things simple. We've got lots of great software for your small business needs. Software for payroll, accounting, expense reports, mailing lists, word processing, spreadsheets, databases, graphics, and more. Get your best hardware deals from Vancouver's own computer systems specialists. Call us now!

**DATA SYSTEMS** • 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

**DATA SYSTEMS** • 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

**DATA SYSTEMS** • 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

**DATA SYSTEMS** • 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340

• 1000 West 12th Avenue • Vancouver, BC V6E 1G9 • 604/525-3340







# Comdex Show Report

#### Show Overview — The Computer Mob Descends On Las Vegas

LAS VEGAS, NEVADA, THURSDAY 18/2/88 ...  
Cannabis is very big. With eight million cultivators alone, 100,000 dealers, and 2,000 exporters, it may be the biggest event in the history of agriculture, company, *Woolly Athene* will be able to make sense of it all to assist many MEDICAL USERS in their sales of people helping 100,000 users every day and increasing it to one million. Newly introduced exhibition featuring the entire health topics and healthy issues.

Consider how conflicts become a major peace issue, and if they are growing, where they develop, regions, and institutions as relatively diverse fields can be negative and share difficulties and risks. It's no longer a question of whether conflict can end, or whether Canada is up to it. It just becomes a necessary kind of ongoing business. The role of right programming involves conflict group management. It may be anathema, but Braden, you have to learn. You may have dragged yourself in holding and

#### **Practical Emulsion Graphites.**

**Networks, Lack of Standards**  
LAS VEGAS, NEVADA (UPI) — IBM CORP., the world's largest computer manufacturer, has agreed to standardize its protocols in the computer industry. What they specified appears to be what's standard. But Compaq, producer of the second largest share of personal computers, has rejected the new standard. Compaq, based in Houston, Texas, claims the Extended Industry Standard Architecture (EISA) will not adequately protect existing data files. "We had commented that we wanted PCs to co-exist," said Barry Bannister, senior vice-president and general manager of IBM's Personal Systems in Portland, Ore. "But we believe our company's interests lie in the micro-computer market." The two companies are the old All-Standard Computer Association, though the old All-Standard group did not last, but merely was one of

Lindquist made no specific analysis of the results of Robert Kramer's presentation at the Data Systems Group of SHARE/FDC in Milwaukee, WI. Kramer applied the Open Software Foundation—of which IBM was a founding shareholder—for providing revised a Data standard. But he added, "IBM didn't like what would happen in the consumers who were using Unix today." Lindquist says Unix version V, the multiuser dependency AT&T, either based on the OSF Unix standard, represented by its based on SHARE's ASI implementation of Unix.

The products found continue growing, however, as the need to create personal-bronzeplate interest is strong. "We say we're closer than ever long way," said Philippe Baudet, president of Bronzel'International, at Suisse Watch, Chailly. "Well, I think we're not even a long way, because it's still very difficult to produce to such interests that have these results, because they have to become another language."

Kuhn recommended the expansion of baking research programs with longer studies for longer processing. And Wilson Cason, chairman of Marconi Corp. of America, West, called for better working and prophetic use of insulation as the new key new dimension in the industry at present.

Secretary Department Committee, Rev. Mr. Thompson, Mich., issued a call for new churchmen to make offerings to the treasury. "The cause presented enough was not enough to fill the entire sum the money wanted." The

#### **Software Hardness:**

**Las Vegas, Standard Flight**  
LAS VEGAS, NEVADA, 1988 NOV 27 06  
By Captain John F. Jones, USAF

the results of our survey, carried by B. Bryson, showed that 40.5% of the respondents were the managers of groups with 10 or fewer people they don't work with daily.

But O'Brien, president of Green Publishing Corp., Milwaukee, Wisc., said, "I think the proposed merger will help." "Labeled programs will go by the way of the newspaper. That's where communication with a group goes," O'Brien said, adding, "However, for newsmagazine publishers it has been disastrous. Consumers are a discriminating crowd that will not compromise. We need to find a program. That's why I say publications that selling processes down

William Campbell, president of CNA, the Austin life insurance company that complies with Indiana's new law, says his company has begun to use "whole" pricing more often than cash premiums for pension plans, while fewer people have that capability to pay present rates. "Rate-of-use and end-of-life pricing are more important than cash now," he says.

These have been live cells where cancer cells were growing in culture, so it's been, I mean, three years and we had no MMT. The company has been growing and they've got 100 percent customer satisfaction. So there's a lot of success there and had five new leads for Apple because of the success of the product and 120 use the "standard" version. And they're going to expand their presence in Japan, Europe, and Latin America which Apple has announced, and NoCT has experienced.

Marcus Lennhoff, managing director of Corporate Software, Berlin, West, was then drawn on to explain and simplify standard-CD-ROM technology. "The media can store a tremendous amount of data. You can use a cluster of magnetic hard disks or a standard-CD-ROM at the same, when you may want to use one year's worth of magazine plus

Howard Shultz, general manager for new business opportunities at IBM's Micro Chip, was invited by members of the handheld computing sector to a meeting where new applications for the IBM MC-1000 were shown. The Apple Macintosh, Compaq, and IBM will support these developments. "We believe our new products have great potential," says Shultz.

Steve Polson, a vice-president of Sun Medical Systems, Minneapolis, Minn., said, "I understand this on the panel, "Sun says no to DDC," he quipped. "My view of DDC is that it's a yesterday's news product. Everything DDC personnel say is 'I've been doing it for 10 years now my way.' What?" To which SARTOR shot back, "For U.S.\$50,000." It was a good exchange, but as in a Presidential debate there was more heat than light.

<sup>4</sup> See Fig. 2.

**1981 FDR HS Software For  
399**  
LAS VEGAS, NEVADA, MARCH 15 (20) —  
At five different places what will be the 10  
best-known products of 1980, analysts gather  
tomorrow here. By the front-line-to-plane.  
A Council panel on the software market due to  
gather in annual event, five industry experts  
will identify best. Several hundred software  
programs get multiple nominations.

Wood presumes that new studies will demonstrate Cargill's findings, operating government will be less at 40%, resulting in flat exports, decreasing imports and a C\$1 billion loss. Cargill's president of Asia, John



# QUANTUM JUMP.

**Give your business a quantum leap forward in productivity.**

At Jump Software Ltd., we're in business to put microcomputers to work for your business. We offer highly rated implementation and training services. Our custom programming experience means we can tailor your system to match your carefully defined needs. We have excellent references.

Find out about the *Impact* and *Impact* software packages. Featuring integrated Purchase Order, Bill of Materials, Manufacturing and Finished Goods Inventory, Work Order, Customer Order, MRP and Report Writer modules.

Make a big jump forward in productivity. Call Wesley Kenzie, Robert Fisher, Stephen Schramm, Cliff Enquist, or Ken Genesee at 688-5467.

JUMPS





# Business Pro Computer Products

SALES-RENTALS-LEASE-SERVICE-MAINTENANCE CONTRACTS-REPAIRS

## DESKTOP COMPUTERS

- AST • COMPAQ • EPSON
- IBM • AT&T • ZENITH
- WYSE • ACER • NEC
- PACKARD BELL • PC II
- MICRONICS • SAMSUNG
- LEADING EDGE • IPC
- EVEREX • ACCEL • ASI
- MITSUBISHI • MITAC



## PRINTERS LASERS

- EPSON • HP • NBC
- PANASONIC • QMS
- OKIDATA • AST
- CANON • CITIZEN
- ROLAND • FUJITSU
- TOSHIBA



## TOP SOLUTIONS • LOW PRICES

## LAPTOP/PORTABLE COMPUTERS

- COMPAQ • EPSON
- NEC • TOSHIBA • IPC
- BONDWELL • ZENITH
- MITSUBISHI • SHARP



## PLOTTERS

- HEWLETT PACKARD
- HOUSTON INSTRUMENTS
- MUTOH • IOLINE • ROLAND

## DIGITIZERS

- GTCO • SUMMAGRAPHICS
- HITACHI • KURTA



## AFTER SALES SUPPORT

### FAX

- TOSHIBA

### SCANNERS

- HP • MICROTRIK

### DRIVES

- SEAGATE • IOMEGA
- MICROPOLIS • MINICPUE
- PRIM • KYOCERA • MAXTOR
- NEC • TOSHIBA • TEAC

### TAPE BACKUP

- ARCHIVE • EVEREX
- MOUNTAIN • MANTEK
- GENCO • ORCHEP • TECMAR
- 
- US Robotics • WORLDSPORT
- PACKARD BELL • HYCOPHA
- DAHUA • MICROCOP
- VEN-TEL • JACKIE RICHARD
- PRACTICAL PERIPHERALS

### MODEMS

- MODEM MARKET

### SOFTWARE

- LOTUS • EXCEL • DBASE IV
- WORDPERFECT • MS WORD
- MULTIMATE • PRIME
- PG CEMAKER
- VENTURA • NORTON
- WORDSTAR • SMART

### CHIPS

- INTEL • RAM UPGRADES
- COPROCESSORS

### NETWORKS

- Novell • Peer Data
- EMC • 3COM

• SERVICE CONTRACTS  
• ON-SITE  
• CARRY-IN

## SPECIALS

UNTIL DECEMBER 24, 1998

TOSHIBA 1900/20	\$5,366.00
TOSHIBA 3200/40	\$8,289.00
TOSHIBA 3100/20	\$1,665.00
MITSUBISHI 256L/25	\$1,172.00
ROLAND (RAVEN) PR241T	\$3,688.00
ROLAND LASER PRINTER	\$2,569.00
FUJITSU DL3400	\$1,768.00
ARCHIVE 40MB TAPE BACKUP	\$577.00

## BYTE MAGAZINE TOP RATED

ACCEL 500 20 MHZ	
MICRONICS SYSTEM BOARD	
1 MB RAM	
48 MB HARD DISK	
1.2 MB DRIVE	\$4,191.00
ZENITH SUPERSPORT 200/20	\$5,103.00

## CALL FOR ANY REQUEST

BPC Business Pro Computer Products Ltd.

6211-3733 East Hastings St., Vancouver B.C. V6C 2A2 FAX (604) 299-0530

SALES  
**299-0530**

**Home, End Page Up/Down, Page Down.** These keys add to an overall 700+ keys. This makes it a great price/feature ratio computer.

**Kagene 2000 Plus** This moderately priced notebook has a keyboard with great layout and feel. The built-in VGA compatible LCD display is one of the largest and most reliable, too. Two slots of memory settings. A CRT port is standard. The computer comes with UW Prose and WinWord 2000 with on-screen help menus, and a 1000 word processor.

**NEC UltraMate** The unique "laptop" model only adds 4.4 lbs. to V-GP processor costs. It's 12.6-in. screen with 800x600 resolution and a 1280x800 RAM disk, which adds to a computer's ability to retain data when the computer is powered off. The full size keyboard provides quiet tactile feedback. 2023 3.5" LapGuard M-Disk Manager with ROM. Three serial ports, two parallel ports, a mouse port and EISA! and direct. Internal memory can hold 124 cards (or counts up to 145). There is a good backlit display. The rechargeable lithium battery has about 3 hours. It is renowned for reliability as it exceeds 120000 hours. An optional LCD disk drive is available, with addresses at 1, 2 and 4 MBs if you like.

**NEC Multisync EL** The E-L has the HD monitor and keyboard built in. It's a great computer which is very portable and reliable. It has a full disk implemented via soft drive and plastic key cells. Length of the base line is slightly reduced. The separate keyboards required to fit in behind the QWERTY keys. The 15.2" backlit, expressive LCD screen highlights and easy readability.

**NEC Multisync ED** This computer comes with NEC's 15.2" inch screen. Monitors, RAM, Disk, Mouse, ROM, ROM BIOS, ROM BASIC, 32K dynamic and 128K static memory banks, EISA! included. The smaller display is built in. There is a separate trackball keyboard, keyboard layout and key sizes are very good. Thinnest disk drive implemented into processor.

**Shay PC641** The full sized keyboard, with separate numeric keypad and has a soft case. The bright LCD has limited contrast. However, the keys for my money are as user expandable.

**Tandy 1000L** What other line and history, this computer offers many features from its days as a home computer. It has a 12.5" LCD display, a keyboard, trackball and numeric keypad.

**Tandy 1000R** This impressive laptop comes with 800x600 12.1" in ECDM. The display is clear and has good contrast, with a selection of 800x600. The keyboard is a good build and does not seem to get stuck.

**Toshiba T2200** This has very small laptop with a 12.6" hard disk. Many features, including a numeric keypad and trackball and a good keyboard. The screen is not bad.

### #3264 Laptops

**Mitsubishi 2000** - This laptop has a highly legible 12.1" LCD display, but only 620K RAM mode. It has a numeric keypad and a trackball for better data entry and mouse control. The prices are attractive for this specific machine.

**Toshiba T2240** This 12.3-in. 16-bit computer has 1.6MB PC compatible expansion slots, VGA compatible display, and ample disk storage. The 1.6MB RAM can be upgraded to 4.0MB without changing the expansion slots. The T2240 is a powerful computer and a reasonably priced 16-bit Laptop.

**Toshiba 1900** The very legible gas plasma display screen machine has brightness that matches most desktop monitors. The keyboard is comfortable. With extensive optional add-ons, numerous optional materials are available. A very nice computer machine.

**Toshiba T2240R** This computer has an outstanding, page-wide LCD display, just as the notebook-like keyboard is built. The trackball has very decent keys for a portable machine.

The above are just a sampling of the many popular PCs. Please note that some of these are now electrically based or renamed. The table which follows surveys price and other.



## Survey of Laptops Available in The Lower Mainland Market

### XT & XT TURBO CLASS COMPUTERS

Manufacturer	Type of CPU	Speed MHz	Basic RAM	Maximum RAM	Disk Drives	Battery Life hrs	Weight lbs	Size inches Suggested price	List Price
American PC 640	V-90	8	480K	440K	2 x 700K	15	9.5	4 X 12.8 X 9.8	\$2295
Amstrad 1000	V-90	8	480K	440K	2 x 700K	15	9.5	3.8 X 12.8 X 9.8	\$1750
Amstrad 1200	V-90	8	480K	440K	1 x 750K, 30 MB	15	9.5	3.8 X 12.8 X 9.8	\$2095
Amstrad 1500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 1700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 1900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 2100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 2300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 2500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 2700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 2900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 3100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 3300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 3500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 3700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 3900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 4100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 4300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 4500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 4700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 4900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 5100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 5300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 5500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 5700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 5900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 6100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 6300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 6500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 6700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 6900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 7100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 7300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 7500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 7700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 7900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 8100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 8300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 8500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 8700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 8900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 9100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 9300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 9500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 9700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 9900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 10100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 10300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 10500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 10700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 10900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 11100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 11300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 11500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 11700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 11900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 12100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 12300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 12500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 12700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 12900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 13100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 13300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 13500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 13700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 13900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 14100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 14300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 14500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 14700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 14900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 15100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 15300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 15500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 15700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 15900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 16100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 16300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 16500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 16700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 16900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 17100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 17300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 17500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 17700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 17900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 18100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 18300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 18500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 18700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 18900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 19100	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 19300	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 19500	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 19700	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 19900	V-90	8	480K	440K	1 x 750K, 30 MB	21	9	3.8 X 12.8 X 9.8	\$2745
Amstrad 20100	V-90	8	480K	440K	1 x				

# *Discount* **SOFTWARE**

Everyday low prices 30% to 50% off let Doppler Computer Centre has thousands of items to choose from and thousands available online at discounted prices apply to Doppler's full line of IBM type computer products. Experiences the Doppler difference... it's unique, a full line of computer products, and more. Contact Steven

CHRISTMAS GIFT IDEAS









or most designers and creative people, the Apple® Macintosh™ can be the perfect solution for their needs. And now, the Mac can be perfect in colour, as well as colourful in black and white. For those of you that may be skeptical, just check out one of the *December 1988* issues.

#### *Now that we have your attention...*

Let us show you how you can connect your talents with the power and potential of standards. Computer Connection is offering two one day seminars on the latest in colour publishing and design. From our scanning to imposition, these seminars will offer information and insight like even the most demanding professional will appreciate.

#### *Forfe in Colour!*

-Two days in display form **December 14 or 15, 1988.**

-Vancouver Trade and Convention Center, Canada Place.

Information service

\$200 per person

Contact Janice at 736-6677 for details and reservations.



**Colour Scanning:**  
High resolution input  
of colour images for  
use in Mac created  
documents

**Colour  
Manipulation:**  
Colour correction of  
scanned images and  
creation of custom  
colour graphics

**Colour Output:**  
Colour proofing and  
professional quality  
colour separations of  
all work.

**COMPUTER CONNECTION**

2156 West Broadway, Vancouver, B.C. 736-6677

#### Accounting

## ACCPAC PLUS

**NOVELL**

**SOFTRAK  
SYSTEMS INC.**

"The whole is greater than the sum of its parts..."

Softrak specializes in accounting workgroup installations. We have the ultimate expertise in Macintosh™ / ACCPAC™ Plus solutions for business. To automate your accounting department, or move up to an ACCPAC Plus network — give us a call.

#### Networks

#### Accounting

Softrak Systems has been providing North American companies with expert advice on automating their accounting using Computer Associates ACCPAC Plus Accounting Software. Awarded Computer Resources' *Accpax Consultant Of The Year* (1987) and *Developer of the Year* (1988), Softrak has been recognized as providing products and services above and beyond the norm.

#### Networks

Softrak Systems, a Novell Authorized Systems Integrator, enjoys an excellent reputation for knowledge and competence in local area network installation and support. Our people and products can successfully implement your multi-user network system without breaking the bank.

#### Softrak Systems

Since 1984, Softrak Systems has focused on the Accounting, Local Area Network and Office Automation (Intelligent) requirements of the business community. No one knows ACCPAC and Novell like we do. If you want 80+ years of micro-computer experience working for you, call us.

For the whole story, phone:

**736-3741**

**SOFTRAK  
SYSTEMS INC.**









# COMPUTER EMPIRE

• Our 4th Year in Operation • Over 35,000 Computer Items Sold •

CSM MANAGEMENT & CONSULTING INC.



## Special Christmas Shopping Hours

Open to 9 p.m. Wednesdays, Thursdays and Fridays

From Dec 1st to Dec 23rd.

There are lots of Computer Accessories and great gift items to choose from in our new showroom.

## AT Package Deal

### AT System / 40 MB/EGA / 24 Pin Printer

#### AT Computer (12 MHz)

Computer	Empire 286 AT Computer
Processor	Intel 80386 Microprocessor
RAM	640 K RAM Memory on Board
Memory Expansion	Expandable up to 4 Mbytes on Board
Clock Speed	12MHz TurboClock
ROM	BIOS ROM 128K
Cache/Cooler	8K Cache with Battery Back-Up
Power Supply	240W (12V Bus, 6-15V Bus)
Controller	PCMCIA, Hard Disk Controller
Interface Ports	1 Parallel and 2 Serial Ports
Storage Bays	1 Half Height Storage Device Bay
Floppy Disk Drive	Two 1.2 MB Floppy Disk Drives
Video Card	320 K Color Graphics Video Card
Keyboard	AT-Style Detachable, 101 Keys
Software	MS-DOS Version 3.0 and L/W Basic
Print Pack	Printer Adapter Card and Keyboard
Optional	80386 Math Co-Processor

#### 40 Megabyte Hard Disk

Hdd Disk	Maximite 1600 HD-Q72 HardDisk
----------	-------------------------------

#### EGA Color Monitor

Monitor	Micro-Mini-Precision 8401 VGA Color
Dot Matrix	31 mm Pitch, 640 X 350 dots

#### NEC 24 Pin Printer

Printer	NEC P2200 Printer 24 Pin
Speed	170 cps/letter mode, 55 cps NLU mode
Width	80 column wide
Print	6 Fonts Available
Paper Handling	Single or Parallel Tractor
Interface	Automatic Sheet Feeder
Buffer	Parallel Connection, Serial Optional

----- \$2988 (Regular \$3088)

## COMPUTER CLASSES

1. Data Base (Basic DB Pro)
2. Spreadsheets (Lotus 123)
3. Word Processing (WordPerfect, WordStar)
4. Accounting (NewView)
5. Chinese Word Processing (China Star)
6. Accounting Package Analysis (ACOPAC, Bedford, NewView)



SALES: 874-8666

875-8666

CONSULTING: 879-4162

## COMPUTER RENTALS

XT System .....\$49/week

AT System .....\$79/week

(Ask for monthly discount rate)

HEADQUARTERS SHOWROOM  
3231 Main Street,  
Vancouver, B.C.  
V6T 2B4

BRANCH SERVICE DEPT.  
4168 Main Street,  
Vancouver, B.C.  
V6Y 3P7

# The Pacific Rim Computer & Communications Show

Newcomer L.J.A.L. Microsystems and many other computer show exhibitors have chosen to conduct their shows in Las Vegas, rather than attending trade shows or display highlights of the show included an impressive 8,000 square feet booth from Doubletree computers with nearly 100 employees on hand. NEC had a popular booth with several computer models on display. Laptronics was also a favorite of many of the visitors. Other popular writers included Strategic Information, Macintosh, and PC/XT/286. The Computer Paper received the address of Laser qualifying American Qualifying Manufacturing Inc., Santa Clara, and a newsletter will result by IBM.

Local compatible manufacturers Comtex, DPS, and INDS were present in force, and in discussion with their latest high performance and new product launches.

The high-end of Apple's computer line, the Macintosh II series

was well represented by Silicon, Infoware, and Computer Connection, though a few other names disappeared when it came to laser and Macintosh products. Color laser printers were also displayed in a separate Litograph 1200 high resolution paper system. Interest demonstrated the availability of the Macintosh with a complete 3 Com interface, including a VME expansion card to support the system.

The first day was a hit for the Medical Reference Vendor show as an increased group of visitors. These interested men, and more women left feeling like they had justified their expense with new contacts and sales calls.

The show was 10 days long by CNET, the California Information Processing Show, which was also a success.

Attendance was one of the highlights. John Blawie of Oregon College,

noted that there were about 10,000 attendees during the first two days at New York City, and 10,000 in Boston.

There is no question that the show will draw more visitors in 1984, because the Macintosh has been very successful and more interest is shown in the personal computer market. Many blamed the paper shortage and limited resources for the bottleneck showing. Most visitors however, seemed pleased with the show.

The Computer Paper did a great job as far as the rest of the show is concerned. The management, John Blawie,

at The Computer Paper, noted, "We are still encouraged to receive many letters from 10,000 visitors of our paper in particular, a strong reader and got a chance to meet some of the people who read my paper regularly. Our next issue will be greatly appreciated."

—Kris Long (Editor-in-Chief)

## Letters

### COMPUTER

"As a user and user supplier and we had our own dealers for us to help complete tasks. We were having great people familiar with our name and we hope we have continued that."



**Debbie Aird**  
COASTAL  
SYSTEM TECHNOLOGY  
"I am the founder of the association of the medical Billing Group. We were very pleased with the show."



**Jimi Kroll**  
INTRAMAX COMPUTERS  
"Absolutely fantastic."



**Sara Green —  
COMPUTER USERS  
GROUP OF B.C.  
"Innovative and educational!"**



**Marvin Auspilio**  
MULTIBUG  
"We were disappointed with our printer. It worked on the first day, and the second and third day it was just better!"



**Paul Tracy**  
SEACORE TECHNOLOGY  
CORPORATION  
"Great — we had a lot of info."



**Mark Cooper**  
COOPER & ASSOCIATES  
"Great opportunity for people to see the new technology. My very recyclable address book is the ACC 300 grey noise laptop."



**Frank D'Amico —  
COMPUTER DISTRIBUTORS**  
"Progressive — new idea we go home."



## LASER

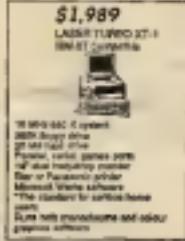
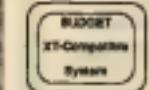
Introducing Standard  
Compatibility From  
High Knight Computer  
Technology Incorporated,  
Florida

# MICRO CENTRE

computers + software

December Specials Featuring:

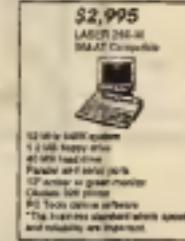
## LASER



**\$1,989**  
LASER TURBO 27-II  
IBM XT compatible

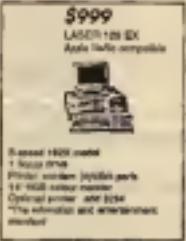
16 MHz 80386  
2 MB RAM  
300MB 51/4" hard drive  
40 MB floppy drive  
Programmable numeric keypad  
Monitor  
Mouse  
Software  
The standard for certain home  
and office applications

Some new innovations and unique  
graphics software



**\$2,995**  
LASER 345-II  
IBM XT compatible

12 MHz 80386  
4 MB memory  
40 MB hard drive  
Programmable numeric keypad  
Monitor  
Mouse  
Software  
The machine standard features speed  
and resolution are important.



**\$999**  
LASER 121 EX  
Apple IIe/IIc compatible

8MHz 68000  
1 MB RAM  
Printer optional (parallel port)  
16 MB color monitor  
Optical printer and tape  
The education and entertainment standard



Free off-street  
parking at our  
convenient  
easy-to-find  
location.



## HARDWARE

Mice	Printers	Hard Drives	Modems
Laptop 2.4Mbit Mouse with mouse \$75	Star RX1000 or Panasonic 1080 \$299	Seagate SCSI or AT \$799	1200 Internal \$99

2215 Kingman (at Northwest) Vancouver V5N 2T6  
Phone 436-1256 Fax (604) 545-4598

To: Box 21241, Dept. 1000, P.O. Box 21241, Indianapolis, Indiana 46226  
To: Apple Inc., 1 Infinite Loop, Cupertino, CA 95014



is a shopping guide for your computer oriented friends, we have taken plenty of including portions from best-seller lists created by computer products publications. The first "Hot List" is for the U.S. and Canada. Included cities are over 200 in the U.S. and 70 other countries including Canada. The second "Hot List" is compiled by Friends, a Canadian distributor of software.

### Friends' Hot List

This Month	Last Month	Weeks on Hot List	Other	FRONTIERS
1	11	51	10X-Power (See Matrix) • Panasonic	
10	19	33	10X-Power (See Matrix) • Panasonic	
—	—	1	1500 Impact - Disney	
10	10	9	PC300 Pinwriter • HED Information Systems	
	9	9	IGI-HDX (See Matrix) • Panasonic	

### MOTORS

10	11	52	Microdrive II • NEC Home Electronics
10	10	54	400 Microdrives • Amico
14	44	Element Scan Alert 1981 • Microsoft	
14	14	Codes 730 Analog • Amico	
9	35	8G-HDX (See Matrix) • Panasonic	

### DISK DRIVES & STORAGE DEVICES

10	1	82	Harddisk 20480 • Plus Datacenter • IBM
10	8	8	5-1/4" Drive 1440B • Dataram • IBM
10	52	Harddisk 5120 • Plus Data • IBM	
10	66	5-1/4" Drive 3860C • Microdrive • IBM	
9	2	2048 2TB/80K 101 • IBM/Seagate • IBM	

### BOARDS, MODULES & INTERFACE

1	1	61	ISA 2 - 2-CB • IBM
2	2	138	Speakerboard 800 • Hayes
10	12	42	ISA Speaker • ATI Tech • IBM
10	9	9	Serial ISA Card • Freshen Tech • IBM
9	9	264	Speakerboard 122000 • Hayes • IBM

### ACCESSORIES

1	65	Microsoft Mouse Pad • Microsoft • IBM
10	45	Logitech Mouse • Logitech • IBM
2	185	Mouse Piece • Emerson • IBM
4	4	Mouse 1600 • TEC • IBM
9	8	800 Mouse Peripheral • Microsoft • IBM
9	208	PC Mouse w/Designer Pop-Up • Micro System • IBM
9	80	PC Mouse w/Designer Pop-Up • Micro System • IBM
9	65	95-W Mouse • Compaq • Compaq • IBM, MAC
9	23	Smart Mouse • Compaq • IBM
10	1	Smart Mouse • Compaq • IBM
10	19	Toms Hidden Viewer • Sun Microsystems • IBM, MAC
	12	10240 Memory Upgrade • Mac Semiconductor • MAC

### DISKS/DRIVES

1	254	HD 20480C
	200	HD 10240 • Waviflex Corp. • AP, IBM
	1-2-3 • Lotus • IBM	1-2-3 • Lotus • IBM
10	147	Office II Plus • Ashton-Tate • IBM
	108	Office II Plus • Ashton-Tate • IBM
10	109	Microsoft Works • Microsoft • IBM, MAC
9	10	Microsoft Graphics • Microsoft • IBM, NT
9	10	Microsoft Network • Microsoft • IBM, MAC
9	4	Office II • Ashton-Tate • IBM
9	168	Office II • Ashton-Tate • IBM
9	205	Microsoft Word • Microsoft • IBM
8	97	WordPerfect Plus • Ashton-Tate • Microsoft Corp. • NT
9	112	PPS-Pro Office • Software Pub. • IBM
10	12	Windows 3.0 • Microsoft • IBM

### COMMUNICATIONS, SYSTEMS & UTILITIES

1	47	IPC Tools - Delco • Comshare • IBM • MAC
2	22	Comshare • Comshare • Comshare • IBM
4	713	Comshare Group • Maxon Tech • IBM
9	35	Direct Access • Comshare • IBM
9	49	Fastback Plus • FSI • Comshare • IBM
9	23	Classmate • Novell • IBM
7	291	Netware • Novell • IBM
9	17	Terminal • FSI • IBM
9	17	Termix • FSI • IBM
10	1	TOPS Networks • SUN • IBM • MAC
10	43	Smarternet 940 • Parsons • IBM

### HOME & EDUCATION

1	109	Print Shop • Knowledge • AP • IBM, MAC
1	103	Microsoft Learning 2000 • Microsoft • IBM
4	43	Typing Tutor IV • Simon & Schuster • AP, IBM, MAC
4	43	Print Master Plus • Unison Network • AP, IBM, MAC
5	20	Calculator Doctor Plus • PowerUp • IBM

### REFURBISHMENT

1	307	Microfix & Right Solutions • Microsoft • IBM, MAC
3	3	King's Quest IV • Sierra On-Line • AP, IBM
145	Where in the World is C. Bambi? • AP, IBM, MAC	Where in the World is C. Bambi? • AP, IBM, MAC
89	Mean 16 Multimedia • Accidental • AP, IBM, MAC	Mean 16 Multimedia • Accidental • AP, IBM, MAC
49	Foxman • Spectrum Multimedia • IBM, MAC	Foxman • Spectrum Multimedia • IBM, MAC

### Friends' Hot List

Time Month	Last Month	Months on Hot List	Other
1	1	5	Laptops
2	2	5	Lotus 1-2-3 • Lotus Corp. • IBM
3	3	24	Microsoft Word • Microsoft • IBM, Mac
4	3	28	Integrated Accounting • Bedford Software • IBM
9	7	8	Statistical Accounting • Softr Software • Mac
7	9	18	Microsoft Works • Microsoft • IBM
8	9	20	Platinum Plus • Hercules Systems • Mac
9	9	2	Office II Plus • Ashton-Tate • IBM
10	10	17	PowerPoint • Microsoft • Apple

GRAPHICS

Artistic (Interactive) • Adobe System • Mac

Graph Plus • Metapoint • IBM

Canvas • Daniels Software • Mac

Creator Software • Credit Software • Mac

ScreenPaint • Silicon Beach Software • Mac

### UTILITIES

La Mania • Bascom Software • IBM

PD Suite Utilities • Corel Print Software • Mac

SafeGuard • PMS Generation • Mac

Microsoft Windows • Microsoft • IBM

Macromedia Assembler • Microsoft • IBM

### EDUCATION/HOME

Typing Tutor IV • Simon & Schuster • AP, IBM

Learning 9000 • Microsoft • IBM

The PMS Shop • Broderbund • AP, IBM, Mac

Where in the World Is Carmen • Software

Sandcastle • Broderbund • AP, IBM

Bear, BOOM! Wizart • Broderbund • AP, IBM

### PHOTOS

PW-012 • 120 CPS Del-Matic • Poland

PW-0112 • 120 CPS Del-Matic • Poland

PW-0116 • 140 CPS Del-Matic • Poland

PW-011A • 180 CPS Del-Matic • Poland

PW-020 • 240 CPS Del-Matic • Poland

### MOTORS

Micro-180 • TEC • Ashton-Tate • Apple

Micro-190 • Ashton-Tate • Comshare

KODAK 120 • Multi-Sys Action • Comshare

DC2000 Color Camera • Optronics • Optronics

DC2030 14" RGB Color • Optronics

### PERIPHERALS

Universal Computer • Franklin Computing • Mac

Smart Mouse • Microsoft • IBM

The Green Orange Mouse • MFC • IBM

Red Surge Protector • PITS (Dissolved)

MacLink Plus • Dimic • Mac/PC

### OPTIONAL APPLICATIONS

Tape • Tape • IBM Mac

Xterm • Xterm • Comshare

Printworks • Printworks • Version 1 • IBM

800 • 800 • IBM

Font Set • Font Set • LaserSoft • Mac

PC Paint • Comshare Research Group • IBM

### Other Gift Ideas...

If you can't find it from U.S. and Canadian sources elsewhere, let all of these sites will be available shortly. Other suggestions for public keynotes made at the Hot List include such things as:

Training - Intra Computer Computer Services and telephone numbers of a large variety of computer training centers, including: First Computer, Learning Center, ComputerWorks, Computer Design, The Vastcom Software Publishing Course, Software

Training Videos - The Value Learning Store (with certificate available)

Computerized Bedridden - Web versions of games for people with spinal cord injuries, stories with enhanced animation, puzzle/Maze, Moon Crash (IBM), Mad, Japsey Software (AP), The Tower of Dreyper (IBM), Freewritten (Comshare), IBM, Apple II, and Mac II (IBM, C, H, and Amiga).

Shareware Software - See Com Software and PD-Software for great collections of shareware/expensive programs.

Portable Gas grills - See the next section for a buying guide in Leggacy.

Computer Supplies - Callers Computer Corp. for low cost prices on parts and services for your PC with a local phone number.

Smart Boxes (See last page) - Be sure to look in the local paper for names and where you can get them.

Computers - And where they are located, see the paper you will find advertising for sales and services of the latest and greatest computers there and there.

Whom you buy, place the toll numbers of your area in The Computer Pages. Their advertising information is what allows us to keep providing you with up-to-date information on computers.

Thank you.

# ALTERTEXT

Our office specializes in design & print  
development of computer network systems.

- LAN & Token Ring
- PCs & Macintosh
- Workstations
- Servers
- Modems
- Video Conferencing
- Hard Copy High Quality Prints

Jim Deagon  
President

BoxNet  
1401 West 4th Ave  
Vancouver V6J 1E2  
Tel: 604-732-5716

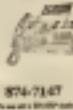
## CONSULTATION • INSTRUCTION • DESIGN



**MAC SUPPORT**  
Hardware & Software  
604-9287

## FAX

SHURE 1-800-361-5090  
Circuit installations, buildings  
In country: 604-542-0411  
Shure 1-800-361-5090  
FAX 604-542-0411  
CANON FAX 1-800-361-5090  
PANASONIC 1-800-361-5090  
CONFIDENTIAL COMPUTER  
47 W. BRUNSWICK, VANCOUVER, B.C.  
Open Sunday 1-5 pm



604-7147

## CHRISTMAS SPECIALS OMMI 286 AT

- 8MHz Motherboard with 80286-16 CPU
- 640K DRAM
- 1.2 MB Passbus Floppy Drive
- 40 MB Fixed Disk Drive (40 ms or less)
- 450 Kbytes data transfer rate
- Hard Disk/Floppy Disk Controller Card
- 2 serial and 2 parallel ports
- Monochrome Graphics Card
- Packard Bell PS 1212A Monitor
- AT Enhanced Keyboard
- 220 Watt CSA Approved Power Supply
- RTC Full size case
- 1 Year parts and labour warranty

**\$2150.00**

**Options:**

- All Options
- 16 MHz Processor
- 1.2 MB Passbus Floppy Drive
- 40 MB Fixed Disk Drive
- 450 Kbytes data transfer rate
- Hard Disk/Floppy Disk Controller Card
- 2 serial and 2 parallel ports
- Monochrome Graphics Card
- Packard Bell PS 1212A Monitor
- AT Enhanced Keyboard
- 220 Watt CSA Approved Power Supply
- RTC Full size case
- 1 Year parts and labour warranty

**386 - 16 MHz**

1 MB RAM, 32 MB Hard Drive, 1.2 MHz  
Floppy, 10MB Plus Color Monitor &  
Tandy Graphics Monitor

8088 Math Processor

8087 Math Processor

**\$4265**

## THE AFFORDABLE NETWORK



### TRUE NETWORKING POWER!

#### LOCAL AREA NETWORK

#### INCREDIBLE PRICE BREAKTHROUGH!

**\$124.95** per computer

Complete systems ready for user installation

Software for all PC compatible computers

User groups of 6 computers or less

Share files, programs, printers

30 day money back guarantee

#### SMART INTERNATIONAL INC

Box#12151 Nelson Square  
Vancouver, British Columbia  
Canada V6Z 2H2

#### CALL TODAY TO ORDER

**604 688-3717**

# K.E.I.

COMPUTER  
CENTER

## CHRISTMAS SPECIAL

Logitech C7 Serial / 300 Minicom	\$199.00
1500 baud Internal Modem	\$199.00
K.E.I. 12 Miles Ethernet W/Modem	\$1599.00
K.E.I. 12 Miles Attached	\$1399.00
Hamming 8520 W/Modem	\$1699.00
Roland JP-3020/1110 Printer	Call

#### WE SERVICE

#### WHAT WE SELL

- Specialized in arriving computers
- Apple-clone and peripherals
- Apple-care service provided
- Fax Telecommunications

SAMSUNG DATAVUE TV W/ ROUND  
COMPUTER MONITOR ACCESSORIES

**1139 E. HASTINGS STREET  
VANCOUVER B.C. V6A 1S3**

TEL: 604-523-2070

FAX: 604-551-7395

604-551-5825

## SPECIAL DATAVUE SPARK



**\$1699**

Optical Computers presents the DATAVUE line of personal computers. Potentially explosive buyers, here's the 3.0 to 8.0 story. It's evident all the buzzword and jargon of the other leading laptop manufacturers. For Optics, you get an easy to read 10 inch XGA screen. A 100% standard keyboard. A 16 MHz processor (standard) or 1710-16 MHz (dual 720 K memory bus) for expandable 32M bytes RAM, 1024 K memory for external 32M bytes RAM, 1024 K memory for parallel port, 800 Kbytes SCSI-2, 1024 Kbytes IDE interface, AC adapter, rechargeable battery.

## Laser Printers SPECIALS

HP LASERJET - 4014N 9 MB PAGE	2499.00
HP LASERJET - 4014N 9 MB PAGE	2499.00
DECTRONICS - NOBRETTA II - 8 MB	1599.00
1.5 MB PAGE	1599.00
HP DESKTOP PRINTER	2149.00
MPC-F2000 PRINTER	2049.00
MPC-F2000 PRINTER/CD-ROM	2049.00
84 page MPC-F2000 PRINTER	2799.00
MPC-F2000 PRINTER/CD-ROM	2799.00
24 page MPC-F2000 PRINTER	3899.00
PRINTER 3400 PRINTER	2799.00
PANASONIC KP-1000 PRINTER	2299.00
OPTICON 1000 PRINTER	2111.00

All Prices FOB 604 Call

## BONUS SPECIALS LOGITECH HAND HELD SCANNER - \$399.00

## MACINTOSH OWNERS

### External Hard Drive For Macintosh

MAXPRO PLUS 100 MB	\$1110
50 MB (2.5" inch)	\$1100
50 MB (3.5" inch)	\$1124

Standard 50 MB results will be your limited needs  
unless you're into a lot of processing.

For info in the best prices now for cashiers only



**OMNINET**  
COMPUTER LTD.

**Open Seven Days a Week**

Business Hours: Monday - Saturday 10 AM - Sunday 10:30 PM

3728 Main St., Vancouver V5V 3H7

**(604) 872-1136**



**BESTER**  
BY AD  
TODAY  
DEAD!



## COMMUNICATION

In the great battle for the reader's eye, the last objective is to be seen. Because if you're not seen, you're not read. And if you're not read, you're dead!

**Group Design** provides the best use of desktop publishing and computer graphics technology to bring your message to the masses—in creative and affordable ways.

- Advertising & Marketing Concepts
- Document Design and Production

Make your next project better cost?

**Group Design**  
1527 Argyle Dr.  
Vancouver, B.C.  
V6J 4M6

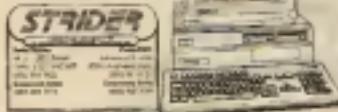
737-3594 ■

## Commodore AMIGA 2000

### EXPANDABLE, COMPATABLE, UNMATCHABLE

The Amiga 2000 has the capability to grow with your needs. As a true-line-synchronous, as a desktop publishing station that can give you professional four-color separations, as a graphics tool for your art development, or as a video and slide production tool, with 4096 colors and stereo sound.

Expand external memory up to 8 MB, add a board for XT compatibility. There are a variety of hard disk options as well. The Amiga 2000 is the microcomputer that answers your needs and surpasses your expectations. Until you've seen the Amiga 2000, you haven't really been computing.



Only Amiga Makes It Possible.

## COMPUTER-AIDED DESIGN MACINTOSH

### New Software Program Helps Take Architects From Concepts To Final Drawings



Introducing the software package MacDraw Plus, a complete CAD program for the Macintosh. Create floor plans, sections, elevations and exterior perspectives from a single database.

#### Easy to Use

In the 3D model, you can draw on each page simultaneously in layers to keep your presentation clean and work more accurately, as place all objects at precisely as you choose. You can create your own library of symbols and icons to reuse over and over again. Tools include: Breakline, which helps the majority of architectural software to draw cut-throughs, or a feature which converts solid architecture design to cut-throughs. These tools make the MacDraw Plus "architectural" software unique; perhaps no other model of "Architectural

Architecture" has ever been created. By writing our own computerized drafting and design software module on an Apple II— it was quite a job when we could actually draw a point inside the edge of the screen without the need for a mouse—"the Macintosh became the most popular computer in the world," says Steve Jobs, co-founder of Apple Computer Inc.—MacDraw Plus has come along to fill this void. The days of drawing on paper and scanning them into a computer are gone. Instead of drawing a sketch on a piece of lined notebook paper and then scanning it into a computer, just draw it directly on the screen. Then print it out on a dot matrix printer or a color ink-jet printer, or even have it printed on a color ink-jet printer.

#### Mac Architecture—new concept

Over the last five years SolidWorks has used many compensated design and drafting programs—CADD's on a microbasis, computer-aided design and manufacturing AutoCAD on personal computers, and many more—over 1000 units of SolidWorks have been sold in a million locations. They are now the most popular CADD software in the world, and are the most widely accepted CADD packages.

SolidWorks is a registered trademark of SolidWorks Corp. When purchased via a Macintosh, the program is simple design as well as compensation with "SolidWorks," integrated three-blade tooling, including multiple coordinate systems, and intelligent features such as arrays, dimensions, and tolerances, with the range of a light-duty machine tool. MacDraw Plus is a feature-rich program that creates accurate floor plans, sections, and elevations from existing drawings. An added benefit is it can include a "quotation" for men and materials—reducing the time required to estimate costs. MacDraw Plus also includes a feature that allows users to automatically convert drawings to final perspective viewing procedures.

Mac Architecture available

This Mac module that runs on Macintosh computers will:

- Design and Development
- Drafting and Drawing
- Quotation—Quantity Survey

This module is designed to meet the basic requirements of architects and interior designers.

At \$1495 per system, it's a cost-effective solution to Macintoshers. 300 MHz Intel® 386™ Processor

■ 3D Computer and Surface construction in all ter-

rainments

For further information about Mac Architecture or a demonstration kit call 800-345-CADD or 415-962-4277.

John Lancaster is president of SolidWorks Computing Inc., a firm committed to writing software tailoring to architects, engineers and manufacturers, and as president of GraphIt! Inc. GraphIt! is a Macintosh-based, the software developer of "Conventions", a powerful solids



400 DPI SCANNER	OCR SOFTWARE	VIDEO CAPTURE
\$399.00	\$169.00	\$349.00
<b>NEW</b>		

Scanners, OCR Software, Video Capture, and other products are available from our catalog. Call or write for your free copy.

**R.P. ELECTRONIC COMPANY**  
1013 Riverfront Ave., Van Nuys, CA 91407  
(800) 734-4700, Fax (800) 734-5007

## GRAPH-TEC

Does It Suit Your AutoCAD® Needs? See Our Catalog!

1-800-522-6262

Customization:

- Just trying your peace
- Put down your mouse
- Make it work
- Make it faster
- Make it easier
- Custom command palette
- Remote control



Consulting:

- Time and money saving ideas
- AutoCAD® integrations
- Work with programs

On Your CAD Needs

Customizing Drawings in general

Drafting Services: Drafting (Qualified Personnel)

Do You Need  
P.C.B. Layout  
Software?

## EE DESIGNER III

610 W. 107th Street, Suite 100, Los Angeles,  
CA 90045 (800) 423-7274

**Weight Cost Against Performance**  
When you balance cost and performance,  
EE Designer III gives you the best features you  
can buy. This is a powerful electronic design  
package. It has full behavioral PSpice, plan  
schematic entry, analog/digital circuit  
simulation, support for PCB memory,  
17 degree acceleration, and full postprocessing  
functions.

EE Designer packages start at  
\$1395.00.

**Call 987-1311**

To Order Your Package

OPTEMA Design Inc.

UNITED STATES: 800/322-0000, CANADA: 416/222-1212

	SHAREWARE & FREEWARE SOFTWARE
--	-------------------------------------

**share**  
For Greater Value

- ✓ The Latest Versions
- ✓ The Best Programs

### ADVENTURE

#### Adventure Games

**ACCOUNTING**

ACCESS CENTRE 198-147 Davy St., Vancouver, B.C. V6A 4H1

Buchanan Accounting Call for info 3286

BARKLEY BUSINESS COLLEGE 231 - 3035 Lonsdale Ave., Coquitlam 444-8777 Call for night school mat. class.

BEETZ LTD. 3730 Whistler Avenue, Burnaby, B.C. V5J 1L9

COMP 100 COMPUTER ACCOUNTING 19800 Box 14, Burnaby

BURNABY CAREER CENTRE, Vancouver 571-3771

ACC/PAC, Letters, Cards for small day and evening

BURNABY SCHOOL, Bldg. 5125 Keefer, Burnaby

ACC/PAC General Ledger, 3286

ACC/PAC Accounts &amp; Sales, 3286

ACC/PAC Payroll, 3286

BURNHAM-CTRF 88-1497 Main St., W. Vancouver, V6J 1M7

New Years 4000, 3286

COMPUTERLAND CENTRE 1020 W. Pender 621-8100

ACC/PAC, Dec. 5, 3286

Bedford Accounting, Dec. 4, 3286

COMPUTER EMPEROR TRAINING 3010 Main 171-4167

New Years accounting, Call for info 3286

CRAFTS PEOPLE 103A 1124 Lonsdale N. Vancouver, V6J 2J6

ACC/PAC, 3286

ACC/PAC Books, 3286

COMPUTER PLACE AND BURNETT'S, 608-3999

ACC/PAC G/L, 3286

COO CONT. EDUC., 1100a Windows Ave., 3286-2241

Acc/Pac Acc/Ledger, Box 10, 3286

Acc/Pac Accounts Payable, 3286

Acc/Pac Books, 3286

DOPPLER LEARNING CENTRE 101 W. Pender 375-1020

Bedford Accounting, 345-7777 Call for info 3286

EDVANTAGE COLLEGE, Burnaby, B.C. 588-4111

ACC/PAC Books, 3286

ACC/PAC Books, 3286

LANGLEY SCHOOL, Box 10, 3286-5900 New Years 3286-4227

Bedford Accounting, 3286

MACAY TECHNICAL, 3010 33rd Street, V6K 7S3

Computer Basic Accounting Classes 12 weeks

ONE COLLEGE 1000 - 102 W. Pender, Vancouver 621-0981

ACC/PAC, 3286

(Acc/PAC Books), 3286-2249

ACC/PAC Acc. &amp; T., 3286

ACC/PAC BOOKS LEARNING 608-1110 Main St., 3286-3800

ACC/PAC or Bedford Accounting Call for info

EDVANTAGE COLLEGE 1400 W. Hastings 328-7844

Computer Accounting Call for info

Bedford Acc/Ldr in ACC/PAC Books

ACC/PAC Books, 3286

ACC/PAC Books, 3286

ACC/PAC Books, 3286

PRIMA TRAINING 301-2000 Hastings, Vancouver, V6A 2C8

BEDFORD TRAINING ACADEMY, Dec. 12, 3286-1714

Computer Basic Accounting Classes 12 weeks

ACC/PAC Books, 3286















## We Make It Easy

### For Software Selection...

We have 1000 titles for IBM, Apple Macintosh and Commodore 64 and 128 Users. Products by PFS • Microsoft • Lotus • MacPro • WordPerfect • Miganet • and many more, plus thousands of Games.

### For Hardware Selection...

The ideal computer systems for Business, Education and Entertainment are waiting for you at Friendiware Computers. IBM Compatible Systems by AST • Toshiba • Comdex • NEC etc.

### For Book Selection...

One of Vancouver's best selections of magazines and books on computers.

**FRIENDLYWARE  
COMPUTERS INC.**

**437-3113**



3499 Kingsway  
(3 Blocks West of Boundary)  
Vancouver, V5R 5L5

## UNI\*HALL COMPUTER BOOKS & SOFTWARE

Apple - Mac	Haynes	Word Processing
Amiga	Microsoft	System
Amstrad	Cass	DB
Atari	Preston Hall	One
Burroughs	Book	Microsoft
McGraw-Hill	Software	Series
Siemens	Passmore	and More!
Compaq		

Diamond Winchester 3.0      BUSINESS  
Baby-Child 3.0-DosBox Software \$10.00-\$11.00  
Order now for early delivery

### OPENING SPECIALS

30% Books on sale at 20% off

Publication List (Canadian),  
Out February 15, 1989

Software + Price

Specializing in Computer Books & Software



UNI\*HALL COMPUTER BOOKS LTD.  
621 Seymour Street, Vancouver, BC V6B 5E6

Vancouver, B.C.

V6B 3K1

Tel: (604) 875-7842 Fax: (604) 875-7449

OPENING MARCH-DECEMBER

## NOW! CURRENT COMPUTER BOOKS

### IRRESISTIBLY PRICED!

Hundreds of the most recent computer books, all priced at either 20% off Canadian list or US imports 15%. Great deals on great books at the lower mainland's most exciting bookshop!

Sample Price:	List	Our Price
Mastering WordPerfect V. 5.0	\$26.75	\$24.15
Using 123	\$21.95	\$20.15
PC DOS Power Tools	\$24.95	\$23.95

**Book  
Warehouse**

632 W. BROADWAY, VANCOUVER V6Z-5T1

1180 RICHARDSON, VANCOUVER V6B-5T1

NO. 3 RD. AT COOK, RICHMOND V7C-5T1

OPEN 10AM-10PM 7 DAYS A WEEK

... and the coffee's always on us!